

WHAT WE CLAIM

- 1) A sterile connection device comprising a connector having two openings, each opening being sealed from the environment so as to form a sterile environment within the connector, at least one opening being sealed from the environment by a first sterile barrier plug, the connector also comprising a port capable of three positions, a first closed position, a second partially opened position and a third open position, at least one coupling device, the coupling device being comprised of a body having an inlet and an outlet, a stem contained within the body and capable of moving at least linearly through the body between a first and second stem position, the outlet being sealed from the environment by a sterile barrier plug and the inlet being sealed to a presterilized component, the outlet of the at least coupling device being attached to either the inlet or outlet of the connector.
- 2) A process of forming a sterile to sterile connection comprising (a) taking a connector having two openings, each opening being sealed from the environment so as to form a sterile environment within the connector, at least one opening being sealed from the environment by a first sterile barrier plug, the connector also comprising a port capable of three positions, a first closed position, a second partially opened position and a third open position, (b) attaching at least one coupling device to an opening of the connector containing the sterile barrier plug, the coupling device having a body having an inlet and an outlet, a stem contained within the body and capable of moving at least linearly through the body between a first and second stem position, the outlet being sealed from the environment by a sterile barrier plug and the inlet being sealed to a presterilized component, (c) moving the port to the second partially opened position, (d) moving the plugs of the connector and the coupling into the port and (e) moving the port to the third open position so as to establish fluid communication between the coupling and the connector.
- 3) The device of claim 1 wherein both openings of the connector is sealed by a sterile barrier plug and a coupling device is attached to each of the two openings of the connector.

- 4) The device of claim 1 wherein the port has two openings, at least one of which is of a dimension suitable for containing at least one sterile barrier plug.
- 5) The device of claim 1 wherein the port is capable of motion relative to the connector selected from the group consisting of linear and rotational motion.
- 6) The device of claim 1 wherein the port has two openings, at least open of which is of a dimension suitable for containing at least one sterile barrier plug and the area of the port surrounding each opening contains a liquid tight seal.
- 7) The device of claim 1 wherein the port has two openings, at least open of which is of a dimension suitable for containing at least one sterile barrier plug and the area of the port surrounding each opening contains a liquid tight seal in the form of an O-ring retained within a performed channel.
- 8) The device of claim 1 wherein the port has two openings, at least open of which is of a dimension suitable for containing at least one sterile barrier plug and the area of the port surrounding each opening contains a liquid tight seal in the form of a formed in place resilient gasket retained within a performed channel.
- 9) A sterile connection device comprising a connector having two openings, an inlet and an outlet, each opening being sealed from the environment so as to form a sterile environment within the connector, the outlet being sealed to a sterile downstream component, the inlet being sealed from the environment by a first sterile barrier plug, the connector also comprising a port capable of three positions, a first closed position, a second partially opened position and a third open position, at least one coupling device attached to the inlet of the connector, the coupling device being comprised of a body having an outlet for the device, a stem contained within the body and capable of moving at least linearly through the body between a first and second stem position, the stem containing an inlet to the device at a location distal from the outlet of the device, the outlet being sealed from the environment by a sterile barrier plug and the inlet being sealed to a presterilized component.